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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/528,199

09/20/2005

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EXAMINER

O BRIEN, JEFFREY D

ART UNIT

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4112

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/528,199	Applicant(s) KITAMURA, YOSHIHARU	
	Examiner JEFFREY D. O'BRIEN	Art Unit 4112	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 September 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 March 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>3/15/2005, 9/20/2005</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Specification

1. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 3 and 11-14 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by JP 2002-195247 herein referred to as '247.
3. For Claim 1, '247 teaches a hinge device for openably and closably connecting one member and the other member, comprising: a base member (22) fixed to the one member; a movable shaft (27) that is rotatably supported by the base member and to which the other member is fixed; a leaf spring member (24) having a curved portion and non-rotatably but axially movably inserted onto the movable shaft; and a fixing plate (42) inserted onto the movable shaft such that the fixing plate does not rotate when the movable shaft rotates but is axially movable, the fixing plate having at least two protrusions (25) provided on its surface in contact with the leaf spring member, characterized in that the leaf spring member and the fixing plate are pressed into contact with each other for relative rotation therebetween.

4. For Claim 3, '247 teaches a hinge device according to claim 1, characterized in that the base member is a bottomed hollow cylindrical case (wherein the hollow interior of the case shown in Figure 1A contains a cylinder), and that the movable shaft (27) onto which the leaf spring member (24) and the fixing plate (42) are inserted is rotatably supported by the case, with the leaf spring member and the fixing plate being received within the case (22).

5. For Claims 11-13 '247 teaches a hinge device according to claim 1, characterized in that a reinforcing leaf spring member is laminated on the leaf spring member, that they differ in spring force and deflection (Paragraph [0027]).

6. For Claim 14, '247 teaches a hinge device according to claim 1, characterized in that the protrusion is a ball (25).

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

9. Claims 1 and 5 are rejected under 35 U.S.C. 103(a) as being being unpatentable over JP 2002-030852 herein referred to as '852.

10. For Claim 1, '852 teaches a hinge device for openably and closably connecting one member and the other member, comprising: a base member (2) fixed to the one member; a movable shaft (1) that is rotatably supported by the base member and to which the other member is fixed; a leaf spring member (3) having a curved portion and non-rotatably but axially movably inserted onto the movable shaft; and a fixing plate (integrated with base member 2) inserted onto the movable shaft such that the fixing plate does not rotate when the movable shaft rotates but is axially movable, the fixing plate having at least two protrusions (peaks on face of 2) provided on its surface in contact with the leaf spring member, characterized in that the leaf spring member and the fixing plate are pressed into contact with each other for relative rotation therebetween. '852 does not teach the fixing plate as a separate piece. It would have been obvious to one of ordinary skill in the art at the time the invention was made to separate the fixing plate from the shaft in order to allow for easier construction. Note that it has been held that constructing a formerly integral structure in various elements involves only routine skill in the art. *Nerwin v. Erlichman*, 168 USPQ 177, 179. Further, MPEP § 2144.04 states: In re Dulberg, 289 F.2d 522, 523, 129 USPQ 348, 349 (CCPA 1961).

11. For Claim 5, '852 teaches a hinge device according to claim 1, characterized in that one of the leaf spring member and the fixing plate is provided with a protrusion (3b of the Spring Washer) and the other is provided with a recess, hole, or cutout (V-Notch

formed between the valleys on the face of 2) into which the protrusion falls, and that a clicking sensation (described in paragraph [0016]) is produced when the protrusion provided in the one of the leaf spring member and the fixing plate fits in the recess, hole, or cutout provided in the other as the leaf spring member and the fixing plate relatively rotate while in press contact with each other.

12. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over JP 2002-195247 herein referred to as '247.

13. For Claim 2, '247 teaches a hinge device for openably and closably connecting one member and the other member comprising: a base member (22) fixed to the one member; a movable shaft (27) that is rotatably supported by the base member and to which the other member is fixed; a leaf spring member (53) having a curved portion and inserted onto the movable shaft such that the leaf spring member does not rotate when the movable shaft rotates but is axially movable; and a fixing plate (integrated with shaft 27) non-rotatably but axially movably inserted onto the movable shaft, the fixing plate having at least two protrusions (25) provided on its surface in contact with the leaf spring member, characterized in that the fixing plate and the leaf spring member are pressed into contact with each other for relative rotation therebetween. '247 does not teach the fixing plate as a separate piece in the embodiment in which it rotates with the shaft. It would have been obvious to one of ordinary skill in the art at the time the invention was made to separate the fixing plate from the shaft in order to allow for easier construction. Note that it has been held that constructing a formerly integral structure in various elements involves only routine skill in the art. *Nerwin v. Erlichman*,

168 USPQ 177, 179. Further, MPEP § 2144.04 states: In re Dulberg, 289 F.2d 522, 523, 129 USPQ 348, 349 (CCPA 1961). Furthermore, applicant has shown in the fixing plate as a separate piece in the embodiment where the fixing plate remains stationary in relation to the shaft (Figure 3A).

14. With regards to Claims 1 and 2, paragraph [0023] of the translation of '247 distinctly points out the reversal of the fixed plate with protrusions and the leaf spring in relation to the hinge axis.

15. Claims 6-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 2002-030852 herein referred to as '852 as applied to claims 1 and 5 above, and further in view of JP 2001-041228 herein referred to as '228.

16. For Claim 6, '852 teaches a hinge device for openably and closably connecting one member and the other member, comprising: a movable shaft that is rotatably supported and a leaf spring member having a curved portion and non-rotatably but axially movably inserted onto the movable shaft. '852 does not teach a bracket fixed to the one member; the bracket is fixed; characterized in that the bracket has at least two protrusions provided on its surface in contact with the leaf spring member, and that the leaf spring member and the bracket are pressed into contact with each other for relative rotation therebetween. '228 teaches a bracket (1) fixed to the one member; the bracket is fixed. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have applied the fixed bracket of '228 to the hinge mechanism of '852 in order to allow for a variety of mounting conditions. '228 does not teach the bracket characterized in that the bracket has at least two protrusions provided on its

surface in contact with the leaf spring member, and that the leaf spring member and the bracket are pressed into contact with each other for relative rotation therebetween. It would have been obvious to one of ordinary skill in the art at the time the invention was made to rearrange the fixed plate containing protrusions integrated with the face of '852 to be integrated with the bracket of '228 instead of the cover member of '852 in order to allow for a variety of mounting conditions. Note that it has been held that rearranging parts of an invention involves only routine skill in the art. *In re Japikse*, 86 USPQ 70. See also, *In re Kuhle*, 526 F.2d 553, 188 USPQ 7 (CCPA 1975) (the particular placement of a contact in a conductivity measuring device was held to be an obvious matter of design choice).

17. For Claim 7, '852 teaches a hinge device according to claim 6, characterized in that one of the leaf spring member and the bracket is provided with a protrusion and the other is provided with a recess, hole, or cutout into which the protrusion falls, and that a clicking sensation (as discussed in paragraph [0016]) is produced when the protrusion provided in the one of the leaf spring member and the bracket fits in the recess, hole, or cutout provided in the other as the leaf spring member and the bracket relatively rotate while in press contact with each other.

18. For Claim 8, '852 teaches a hinge device for openably and closably connecting one member and the other member, comprising: a movable shaft; a leaf spring member having a curved portion and non-rotatably but axially movably inserted onto the movable shaft, characterized in that at least two protrusions are provided on a contact surface of one of the fixing plate and the leaf spring member, and that the fixing plate and the leaf

spring member are pressed into contact with each other for relative rotation therebetween (as disclosed previously). '852 does not teach a first bracket non-rotatably and fixedly installed on the movable shaft and fixed to the one member; a second bracket rotatably and axially movably inserted onto the movable shaft and fixed to the other member; a fixing plate secured onto the second bracket while having the movable shaft inserted through the fixing plate. '228 teaches a first bracket (3) non-rotatably and fixedly installed on the movable shaft and fixed to the one member; a second bracket (1) rotatably and axially movably inserted onto the movable shaft and fixed to the other member. It would have been obvious to one of ordinary skill in the art at the time the invention was made to apply the brackets of '228 to the hinge device of '852 in order to allow for a variety of mounting conditions. '228 does not teach a fixing plate secured onto the second bracket while having the movable shaft inserted through the fixing plate. It would have been obvious to one of ordinary skill in the art at the time the invention was made to rearrange the fixed plate containing protrusions integrated with the face of '852 to be integrated with the bracket of '228 instead of the cover member of '852 in order to allow for a variety of mounting conditions. Note that it has been held that rearranging parts of an invention involves only routine skill in the art. *In re Japikse*, 86 USPQ 70. See also, *In re Kuhle*, 526 F.2d 553, 188 USPQ 7 (CCPA 1975) (the particular placement of a contact in a conductivity measuring device was held to be an obvious matter of design choice).

19. For Claim 9, '852 teaches a hinge device according to claim 8, characterized in that one of the leaf spring member and the fixing plate that is secured onto the second

bracket is provided with a protrusion and the other is provided with a recess, hole, or cutout into which the protrusion falls, and that a clicking sensation (as discussed in paragraph [0016]) is produced when the protrusion provided in the one of the leaf spring member and the fixing plate fits in the recess, hole, or cutout provided in the other as the leaf spring member and the fixing plate relatively rotate while in press contact with each other.

20. For Claim 10, '852 does not teach a hinge device characterized in that: the movable shaft has a flange portion provided at a midway position thereof; a friction plate is non-rotatably but axially movably inserted onto the movable shaft while in contact with the flange portion of the movable shaft; a reinforcing plate is secured, while being inserted onto the movable shaft, onto a side surface of the second bracket which is opposite to a side surface onto which the fixing plate is secured; and the friction plate and the reinforcing plate are pressed into contact with each other for relative rotation therebetween. '228 teaches a hinge device characterized in that: the movable shaft has a flange portion (2b) provided at a midway position thereof; a friction plate (4) is non-rotatably but axially movably inserted onto the movable shaft (2) while in contact with the flange portion (2b) of the movable shaft (2); a reinforcing plate (5) is secured, while being inserted onto the movable shaft (2), onto a side surface of the second bracket (1) which is opposite to a side surface onto which the fixing plate is secured; and the friction plate (4) and the reinforcing plate (5) are pressed into contact with each other for relative rotation therebetween. It would have been obvious to one of ordinary skill in the art at the time the invention was made to apply the reinforcing plate and friction plate of

'228 to the hinge device of '852 in order to create extra torque for the hinge and in order to allow for a variety of mounting conditions.

21. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over JP 2002-030852 herein referred to as '852 as applied to claims 1 above, and further in view of JP 2002-195247 herein referred to as '247.

22. For Claim 4, '852 teaches a hinge device according to claim 1, characterized in that the base member is a hollow cylindrical case that is open at both ends (Figure 4, Numeral 2) and that the movable shaft onto which the leaf spring member and the fixing plate are inserted is rotatably supported while penetrating through the case (as seen in Figures 4 and 5 by the shaft 1 penetrating the case 2). '852 does not teach the leaf spring member and the fixing plate being received within the case. '247 teaches the leaf spring member and the fixing plate being received within the case (Figure 3). It would have been obvious to one of ordinary skill in the art at the time the invention was made to apply the case of '247 which houses the spring member and fixing plate to the hinge device of '852 in order to protect said spring member and fixing plate.

Conclusion

23. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Kitamura et al. (US 6,763,552), Lu (US 6,665,907), Katoh (US 5,970,580), Katoh (US 6,125,507), Tanahashi et al. (US 6,081,969), Kaneko et al. (US 6,421,878), Chung (US 6,163,928).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeffrey D. O'Brien whose telephone number is (571)270-

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3655. The examiner can normally be reached on Monday through Friday 8:00am-5:30pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David V. Bruce can be reached on 571-272-2487. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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/David V Bruce/
Supervisory Patent Examiner, Art Unit 4112